

INVISIBLE SETTING FOR PRECIOUS STONES

The present invention relates to the field of jewelry and more particularly to an item of jewelry comprising an invisible mounting system enabling
5 several precious stones to be assembled together.

With this invisible mounting system it is possible to create, thanks to a special arrangement of several precious stones, an esthetic appearance which gives the illusion of a single large precious stone when viewed from
10 the table side.

Invisible settings are well known and common in the jewelry world. There are already several methods of invisible setting for precious stones in the prior art.
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To facilitate an understanding of this specification, figure 7 depicts a precious stone showing the usual terms which are used, among others, in the rest of this specification.

20 Document No. US 6,112,552 provides an invisible mounting system composed of several slots parallel to each other and designed to take rectangular precious stones laid side by side. The width of the slots has been determined in such a way as to make the mounting means invisible when all the stones are assembled. The sides of the slots have a shoulder
25 and a certain elasticity, which means not only that said stones can be assembled by simply pushing them into position, but also that the stones are held in their positions by the pressure exerted by the shoulder in longitudinal grooves cut into the pavilion of the precious stone. This system is usually known as a channel setting.

30 Another system described in document No. FR 2,627,359 provides an invisible setting which has the advantage that only alternate stones are grooved in the pavilion, and that the grooves are less visible through the table of the precious stone. The grooved stones hold the ungrooved stones
35 in place. This system does not dispense with the need for grooves on the table side of the stones but simply attenuates them.

Document US 5,649,434 provides an invisible setting for a single brilliant-cut diamond. This diamond has two flat surfaces on the pavilion of the

diamond set 180° apart immediately underneath the girdle. Each of these two surfaces has a longitudinal groove into which is snapped a shoulder situated on the inside diameter near the edge of a cylinder acting as a support. The outside diameter of this cylinder is equal to the diameter of the girdle and so is partly concealed when the diamond is observed.

All the systems disclosed in the prior art merely arrange a number of precious stones parallel to each other, so limiting the final geometric shape to a rectangle or square. Furthermore, while concealing the support these systems do not prevent the grooves from being seen from the table side of the precious stones when the stones are fitted together. Invisible settings intended for a round geometrical shape, such as document US 5,649,434, contain only one stone.

It is an object of the present invention to provide an invisible or mysterious setting system which has the particular feature that it allows several precious stones of predefined shape to be assembled around a central precious stone in such a way as entirely to eliminate grooves on the table side of the precious stones. The result is an attractive appearance which gives the illusion of one large precious stone when the stone is viewed from the table side.

The invention achieves this object by means of an item of jewelry consisting of a central stone and several peripheral stones arranged about said central stone on a special support. The latter comprises a first ring concentric with and connected to a second ring smaller in diameter and greater in height than the first ring. Said rings are connected for example by means of several convergent arms extending between the base of the first and second rings at regular intervals. The second ring comes to a T-shaped shoulder on its top edge with one side designed to be snapped into a longitudinal groove passing all the way around the circumference of the pavilion of the central stone and its other side snapped into a groove present in one of the facets of the peripheral stones. The latter are also held firmly in their positions by a slot formed on the inside of the perimeter of the second ring.

Each item of jewelry has the advantage of presenting a continuous fire between the central stone (2) and the peripheral stones (3) because there are none of the grooves usually created by the systems disclosed in the

prior art.

This item of jewelry therefore has the same visual appearance as ordinary precious stones of different sizes such as five, ten, or fifteen carat stones,
5 but has a much lower cost price because it uses much less raw material.

Other features of the invention are set out in the claims and will appear in the following description.

10 An embodiment of the invention will now be described as an example, no limitation being in any way implied, with reference to the diagrammatic figures, in which:

- 15 - figure 1 is a perspective view of an item of jewelry;
- figure 2 is a bottom view of the item of jewelry;
- figure 3 is a top view of the item of jewelry;
- 20 - figure 4 is a cross section through the item of jewelry taken on A-B as marked in figure 3;
- figure 5a is a top view of the central stone;
- 25 - figure 5b is a side view of the central stone;
- figure 6a is a top view of one of the peripheral stones;
- figure 6b is a side view of figure 6a;
- 30 - figure 6c is a side view of figure 6a; and
- figure 7 shows an ordinary precious stone labeled with the usual terms employed in jewelry.

35 In this embodiment of the present invention, an item of jewelry (1) consists of an octagonal diamond (2) and eight small trapezoidal diamonds (3). These diamonds are held securely together by a special support (4).

Said support (4) consists of a first ring (5) concentric with a second ring (6) smaller in diameter and greater in height than the first ring (5). The two rings (5, 6) are connected at their bases by a number of converging arms (7) arranged at regular intervals. The second ring (6) comes to a T-shaped shoulder (8) on its top edge. One of the sides of the shoulder (8) is designed to be snapped into a longitudinal groove (9) passing all the way around the circumference of the pavilion (10) of the octagonal diamond (2). The other side of the shoulder (8) is snapped into a groove (11) present in one of the facets near the edge of each small diamond (3). The latter diamond is held firmly in its position by a slot (12) formed on the inside of the perimeter of the first ring (5). The placement of each of the small diamonds (3) next to each other around the perimeter of the central stone (2) held by the support (4) reproduces the continuous crown of a brilliant-cut diamond.

Said eight small diamonds (3) have been cut in such a way that the length of the edge of one of their sides is identical to the length of the edge of one of the facets (14) on the crown of the octagonal diamond (2).

The height and diameter of the first ring (5) have been predetermined to create an angle of incidence of the table (13) of each of the eight small diamonds (3) equal to that of one of the facets (14) of the crown of the octagonal diamond (2).

Said facet of the crown of the octagonal diamond (2) is placed adjacent to one of the edges of the table (13) of the small diamond (3) in such a way as to reconstruct the bezel facet (15) of a brilliant-cut diamond. The placement of the two facets reconstructing said bezel facet (15) in the same plane results in a continuous fire.

This setting system turns a genuine small 16/16-cut diamond into a larger brilliant-cut diamond when observed from above, yet uses around one tenth of the raw material necessary to create a genuine diamond of this type.

In this embodiment, the perimeter of the cylinder (5) is continuous and opaque, thereby masking the mounting system, while the cylinder (6) may have discontinuities.

The embodiment is in no way restrictive. Instead of the embodiment

described above, therefore, the diamonds may be replaced by any other type of precious or semiprecious stone to create items of jewelry having varying esthetic appearances.

- 5 The item of jewelry (1) may be mounted on a ring or pendant.

The invention is not limited to rings. Rather, it is applicable to all sorts of items of jewelry such as earrings, necklaces and bracelets.

- 10 The invention also relates to a decorative item comprising the item of jewelry of the present invention.